THE 4th JERUSALEM CONFERENCE
ON INFORMATION TECHNOLOGY (JCIT)
NEXT DECADE IN INFORMATION TECHNOLOGY

IVERTICAL INFORMATION TECHNOLOGY

UNITAL INFORMATION TECHNOLOGY

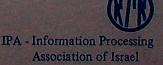
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PROGRAM

May 21-25, 1984 Jerusalem, Israel



THE 4th JERUSALEM
CONFERENCE
ON INFORMATION
TECHNOLOGY (JCIT)
NEXT DECADE IN INFORMATION
TECHNOLOGY
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PROGRAM

May 21-25,1984 Jerusalem, Israel

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THE 4th JERUSALEM
CONFERENCE
ON INFORMATION
TECHNOLOGY (JCIT)
NEXT DECADE IN INFORMATION
TECHNOLOGY
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PROGRAM

May 21-25,1984 Jerusalem, Israel

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THE 4th JERUSALEM CONFERENCE ON INFORMATION TECHNOLOGY (JCIT)

Organized by:

IPA, Information Processing Association of Israel

Sponsored by:

Promoted by:

IEEE Computer Society

In Cooperation with:

ACM, Association for Computing Machinery CIPS, Canadian Information Processing Society

AFIPS, American Federation for Information Processing

AFCET, Association Française pour la Cybernetique, Economique et Technique

Software Center, Israel Export Institute

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Harvey S. Gellman, Gellman, Hayward & Partners, Canada Josef Raviv, IBM Israel Scientific Center, Israel

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Israel Borovits, Tel Aviv University, Israel

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Amiram Shore, M.L.L. Software and Computer Industries, Ltd., Israel

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Abraham Ginzburg, Everyman's University, Israel

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Michael Hanani, Ben Gurion University of the Negev, Israel

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Israel Borovits, Tel Aviv University, Israel

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Mordechai Avior, Ministry of Industry and Trade, Israel

Andy Ben-Artzy, Bank Leumi Le Israel B.M. Ltd.

Avi Cohen, Tel Aviv University, Israel

Emanuel Cohen, Mekorot, Israel

Shlomo Halevi, Malam Systems Ltd., Israel

Arie Hinkis, Afik Computers Ltd., Israel

Ruth Kupperman, Secretary of IPA, Israel

Moshe Mor, Weizmann Institute of Science, Israel

Benjamin Neuhof, Ministry of Industry and Trade, Israel

Shlomo Sitton, Ministry of Finance, Israel

Ilene Winer, Israel Export Institute, Israel

Zvi Yanai, IBM Israel Ltd., Israel

PROGRAM COMMITTEE

CHAIRPERSONS:

Noah Prywes, University of Pennsylvania, U.S.A. Amiram Shore, M.L.L. Software and Computer Industries Ltd., Israel

MEMBERS:

Rony Atar, Israel Discount Bank Ltd., Israel John Bennett, University of Sidney, Australia Shimon Bukshpan, Municipality of Petah Tikva, Israel Sylvia Charp, Consultant - Education and Training, U.S.A. Sidney Fernbach, Consultant, U.S.A. Edward Feigenbaum, Stanford University, U.S.A. Aaron Finerman, University of Michigan, U.S.A. Herbert Freeman, Rensselaer Polytechnic Institute, U.S.A. Bernard Galler, University of Michigan, U.S.A. Aharon Gill, Rafael/Galram, Israel Susan Graham, University of California - Berkeley, U.S.A. Gideon Halevi, Israel Military Industries, Israel Arvind K. Joshi, University of Pennsylvania, U.S.A. Leonard Kleinrock, University of California-L.A., U.S.A. Zohar Manna, Stanford University, U.S.A. Naftali Minsky, Rutgers University, U.S.A. Roger N. Nagel, Lehigh University, U.S.A. E.J. Neuhold, Hewlett-Packard, U.S.A. Luis Osin, Centre for Educational Technology, Israel Avraham Peled, International Business Machines Corporation, U.S.A. Shmuel Penchas, Hadassah Medical Organization, Israel Kenneth Preiss, Ben-Gurion University of the Negev, Israel Judith M.S. Prewitt, Bell Laboratories, U.S.A. Brian Randell, Computing Laboratory, Newcastle-upon-Tyne, England Uri Shamir, Technion - Israel Institute of Technology, Israel Jeffrey Ullman, Stanford University, U.S.A. Shimon Ullman, MIT, U.S.A. and Weizmann Institute of Science, Israel Stanley Winkler, U.S. National Bureau of Standards, U.S.A. Moshe Zloof, International Business Machines Corporation, U.S.A.

ACKNOWLEDGEMENTS

(In alphabetical order)

The Organizing Committee gratefully acknowledges the financial assistance and support provided by:

Afik Computers Subsidiary of Afik Investments Co. Ltd.

Alpha Terminals Ltd.

Bank Leumi Le Israel B.M.

Bitcom Agencies Ltd.

Clal Systems Ltd. - Burroughs Distributor for Israel

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N.C.R. - I.E. Mittwoch & Sons Ltd.

Shaked Computer Systems Ltd.

Tnuva Computers Ltd.

Yalan, Mishkei Tnuat Hamoshavim

								_		
Friday, May 25									Thursday, May 24	
08:30-10:00 Plenary Session Challenge of the Fifth Generation 10:00-10:30 Coffee Break 10:30-12:00 Plenary Session Challenge of the Fifth Generation (Cont'd) 12:00-13:00 Panel Discussion 13:00-13:15 Closing of Conference		16:00-17:00 Computer Communications Networks			14:00-15:30 Computer Communications Networks		11:00-12:30 Computer Communications Networks		09:00-10:30 Robotics	HALL A
	20:30 Farewell Banquet (optional) at the Jerusalem Hilton	16:00-17:30 Office Automation		Coffee	14:00-15:30 Databases	Lunch	11:00-12:30 Databases	Coffee	09:00-10:30 Databases	HALL B
	n Hilton	16:00-17:00 Information Systems		Break	14:30-15:30 Information Systems	Break	11:00-12:30 Reliable Systems	Break	09:00-10:30 Reliable Systems	HALL C
			מושב עעיכה: חלוקת פרסים רב־שיח	15:00	14:00-15:00 ניהול ומערכות מידע	17 10000 1-1 100000 1-1 10000 1 10000 1	11:00-12:30 שימושים במחשבים בחקלאות ובמים (המשך)		09:00-10:30 שימושים במחשבים בחקלאות ובמים	אולם אוסישקין

TIME TABLE

Monday May 21 Tuesday,		18:30 Reception 21:00 Israeli F	Reception - (Binyanei Ha'ooma - Hall A) Israeli Folklore Performance (Jerusalem Theatre) Opening Ceremony - (Ussishkin Hall)	
Tuesday, May 22			Break	5
	HALL A	HALL B	HALL C	
	11:30-13:30 AI and Image Processing	11:30-13:00 Computer Architecture	11:30-13:00 Foundations of Computer Science	l
		Lunch	Break	
	15:00-16:00 Al and Image Processing	14:30-16:00 Computer Architecture	14:30-15:30 Foundations of Computer Science	
		Coffee	Break	
		State of State of	Special Plenary Session - (Ussishkin Hall) State of Industry and R & D in Israel	in F ael
		20:30 Reception	Reception by the Municipality of Jerusalem at the Israel Museum	Jeru
Wednesday, May 23	09:00-11:00	09:00-11:00 Computers in Education	09:00-11:00 Computers in Medicine	V111/11
		Coffee	Break	1
	11:15-12:15 Graphics	11:15-12:15 Computers in Education	11:15-12:15 Natural Language Interfaces & Knowledge Acquisition	G G
		Lunch	Break	
	13:30-15:00 Graphics	13:30-15:00 Software	13:30-15:00 Natural Language Interfaces & Knowledge Acquisition	e
		Coffee	Break	
	15:30-17:00	15:30-17:00	15:30-17:00	
	Hardware-Software Interactions	Software	Expert Systems	
		Break		
	17:15-18:15 Hardware-Software Interactions	17:15-18:15 Computers in Education	17:15-18:15 Expert Systems	
	THICHACHOUS			

THE 4th JERUSALEM CONFERENCE ON INFORMATION TECHNOLOGY

PROGRAM

All sessions and events will be held at the Binyanei Ha'ooma Convention Center, unless stated otherwise.

Monday, 21 May, 1984

HALL A

18:30

Reception

21:00 Israeli Fo

Israeli Folklore Performance (at the Jerusalem Theatre)

Tuesday, 22 May, 1984

09:00-11:00 OPENING CEREMONY

USSISHKIN HALL

M.C.: Yair Aloni

GREETINGS:

Joseph Raviv

Co-Chairperson of the Conference, Israel

Harvey S. Gellman

Co-Chairperson of the Conference, U.S.A.

David H. Brandin

President, ACM, Association for Computing Machinery, U.S.A.

Sylvia Charp

President, AFIPS, American Federation for Information Processing, U.S.A.

Chaim Herzog

President of the State of Israel

IPA AWARDS - to be presented by:

Abraham Ginzburg

President of the IPA, Information Processing Association of Israel

Israel Police Band

Michal Tal, Vocalist

KEYNOTE ADDRESS:

COMPUTERS IN INTERNATIONAL ECONOMICS AND BUSINESSES

Lawrence Klein, Nobel Laureate

University of Pennsylvania, U.S.A.

11:00-11:30 Coffee Break

SCIENTIFIC PROGRAM

Tuesday, 22 May, 1984

	AI AND IMAGI	E PROCESSING	HALL A
	Chairpersons:	S. Ullman, MIT, U.S.A., and Weizmann Institute of Science A. Gill, Galram, Israel	ence, Israel
11.30–12.00	HUMAN AND MA S. Ullman, MIT	CHINE VISION , U.S.A., and Weizmann Institute of Science, Israel	
12.00–12.30	ARTIFICIAL INT P. Winston, MI	ELLIGENCE AND MACHINE VISION T, U.S.A.	
12.30–13.00		L INTELLIGENCE CONTRIBUTIONS TO AIR TRAFFIC CONTROCONA State University, U.S.A.	OL.
13.00–13.30		CONTOUR CODING – A TOOL FOR REAL TIME PATTERN RECO	OGNITION
13.30–14.30	Lunch break		
	COMPUTER A	RCHITECTURE	HALL B
	Chairpersons:	S. Fernbach, Consultant, U.S.A. E. Gruengard, IBM Israel Ltd., Israel	
11.30–12.00		ers of the future onsultant, U.S.A.	
12.00–12.30		RS: THE NEXT TEN YEARS - A USER'S VIEW Lawrence Radiation Laboratory, U.S.A.	
12.30–13.00		R PERSPECTIVES versity of Illinois, U.S.A.	
13.00–14.30	Lunch break		

Tuesday, 22 May, 1984

	FOUNDATION	S OF COMPUTER SCIENCE	HALL C
	Chairpersons:	Z. Manna, Stanford University, U.S.A.A. Pnueli, Weizmann Institute of Science, Israel	
11.30–12.00	21,200,11.21.11	OGRAM SYNTHESIS ford University, U.S.A.	
12.00-12.30		ROTOCOLS FOR CONCURRENCY CONTROL ard University of Jerusalen	ı, İsrael
12.30-13.00		NODELS OF SECURITY IN OPERATING SYSTEMS niversity of California, Berkeley, U.S.A.	
13.00-14.30	Lunch break		
	AI AND IMAGI	E PROCESSING	HALL A
	Chairpersons:	S. Ullman, MIT, U.S.A., and Weizmann Institute of Science A. Gill, Galram, Israel	e, Israel
15.00–15.30		LUTION TEXTURE ANALYSIS AND CLASSIFICATION r, R. Hartley and D. Avnir, University of Maryland, U.S.A.	
15.30–16.00		ING OF STOMACH CANCER CYTOLOGY Zajicek and I.S. Levij, The Hebrew University of Jerusalem Israel	/Hadassah
16.00–16.30	Coffee break		

	COMIT CIDITIES	NOMINE OF CARD	HALL B
	Chairpersons:	S. Fernbach, Consultant, U.S.A. E. Gruengard, IBM Israel Ltd., Israel.	
14.30–15.00		OF SEVERAL (UNIVERSITY) SUPERCOMPUT sity of California, Berkeley, U.S.A.	ER ARCHITECTURES
15.00–15.30		V ARCHITECTURES . Culler, Massachusetts Institute of Techr	nology, U.S.A
15.30–16.00		RALLEL PROGRAMS FROM NONPROCEDU iversity of Delaware, U.S.A.	RAL SPECIFICATIONS
16.00–16.30	Coffee break		
	FOUNDATION	S OF COMPUTER SCIENCE	HALL C
	Chairpersons:	Z. Manna, Stanford University, U.S.A. A. Pnueli, Weizmann Institute of Science	
14.30–15.00		PROGRAMMING LANGUAGE University of Illinois, U.S.A.	
15.00–15.30		PROBLEM SOLVING STRATEGIES USING TH versity of Edinburgh, Scotland	E META-LEVEL
16.30–18.00	STATE OF IND	USTRY AND R& D IN ISRAEL	USSISHKIN HALL
	(Plenary Session)	
	GUEST LE	CURERS:	

HALL B

COMPUTER ARCHITECTURE

Eli Hurvitz, President of the Manufacturers Association of Israel

Amos Horev, Managing Director, Bank Leumi Le-Israel Investments Co, Ltd.

Uzia Galil, President, Elron Electronic Industries Ltd.

Gideon Patt, Minister of Industry and Trade

VLSI

HALL A

Chairpersons:

J. Ullman, Stanford University, U.S.A.

I. Berger, IBM Israel Ltd., Israel

- (19.(1)-(19.3() VI.SI COMPLEXITY AND SUPERCOMPUTER ORGANIZATION

 J. Ullman, Stanford University, U.S.A
- 09.30-10.00 THE MOSIS SYSTEM

 D. Cohen, University of Southern California, U.S.A.
- 10.00-10.30 EXTENSION OF THE TWO-LEVEL FORMAT FOR THE DESIGN OF MULTI-LEVEL LOGIC
 H. Fleischer, L. Maissel and R.L. Phoenix, International Business Machines Corporation,
 U.S.A
- 10.30-11.00 AN INFORMATION ANALYSIS APPROACH TO THE DESIGN OF DATABASES FOR VLSI CAD-SYSTEMS

 M. Marchesi, Consiglio Nationale delle Ricerche, Italy
- 11.00-11.15 Coffee break

COMPUTERS IN EDUCATION

HALL B

Chairpersons:

S. Charp, Consultant – Education and Training, U.S.A. L. Osin, Centre for Educational Technology, Israel

- 09.00-09.30 COMPUTERS IN ELEMENTARY AND SECONDARY EDUCATION TWO DECADES OF CHANGE S. Charp, Consultant Education and Training, U.S.A.
- 09.3(1-10.00) TRENDS AND FACTORS INVOLVED IN THE SCHOOL USE OF COMPUTERS IN THE U.S. A. Melmed and M. Davis, U.S. Department of Education, U.S.A.
- 10.00-10.30 PREPARING MANAGERS TO COPE WITH COMPUTERS H.C. Lucas, New York University, U.S.A.
- 10.30-11.00 COMPUTER-AIDED EDUCATION IN ARCHITECTURE Y.E. Kalay, SUNY at Buffalo, U.S.A.
- 11.00-11.15 Coffee break

	COMPUTERS IN MEDICINE HALL C
	Chairpersons: J.M.S. Prewitt, Bell Laboratories, U.S.A. S. Penchas, Hadassah Medical Organization, Israel
09.00-09.30	IMAGE PROCESSING APPLICATIONS IN HISTOLOGY J.M.S. Prewitt, Bell Laboratories, U.S.A.
09.30–10.00	KNOWLEDGE BASE SYSTEMS FOR MEDICAL PRACTICE R.R. Grams, University of Florida, U.S.A.
10.00–10.30	A DISTRIBUTED HOSPITAL INFORMATION SYSTEM S.G. Tolchin, S.A. Kahn, R.L. Stewart, E.S. Bergan and G.P. Gafke, Johns Hopkins University, U.S.A.
10.30-11.00	EXPERT SYSTEMS FOR DIAGNOSIS SUPPORT – A CONCEPTUAL TUTORIAL M. Ben-Bassat, Tel Aviv University, Israel, and University of California, U.S.A
11.00–11.15	Coffee break
	GRAPHICS HALL A
	Chairpersons: H. Freeman, Rensselaer Polytechnic Institute, U.S.A. S. Bergman, Edunetics, Israel
11.15–12.45	A SYSTEM FOR AUTOMATIC MAP NAME PLACEMENT H. Freeman and J. Ahn, Rensselaer Polytechnic Institute, U.S.A.
12.45–12.15	EARTH IMAGING AND DATA PROCESSING FOR MAPPING ANALYSIS, A TECHNOLOGICAL ASSESSMENT AND NEW DEVELOPMENTS R. Bernstein, J.B. Lotspiech and H.J. Myers, International Business Machines Corporation, U.S.A.
12.15–13.30	Lunch break
	COMPUTERS IN EDUCATION HALL B
	Chairpersons: S. Charp, Consultant – Education and Training, U.S.A. L. Osin, Centre for Educational Technology, Israel
11.15–11.45	COMPUTER AIDED INSTRUCTION IN JEWISH EDUCATION I. Jaskoll, Bramson Ort Technical Institute, U.S.A
11.45–12.15	TOAM: C.A.I. ON A NATIONAL SCALE L. Osin, Centre for Educational Technology, Israel
12.15–13.30	Lunch break

NATURAL LANGUAGE INTERFACES AND KNOWLEDGE ACQUISITION

HALL C

Chairpersons:

A.K. Joshi, University of Pennsylvania, U.S.A.

Y. Choueka, Bar Ilan University, Israel

11.15-11.45 BEYOND SYNTACTIC SUGAR: NATURAL LANGUAGE INTERACTION WITH DATA BASES AND EXPERT SYSTEMS

A.K. Joshi and B. Webber, University of Pennsylvania, U.S.A.

11.45–12.15 ISSUES IN THE DESIGN OF TRANSPORTABLE NATURAL LANGUAGE INTERFACES **B. Grosz**, SRI International, U.S.A.

12.15-13.30 Lunch break

GRAPHICS

HALL A

Chairpersons:

H. Freeman, Rensselaer Polytechnic Institute, U.S.A.

S. Bergman, Edunetics, Israel

13.30–14.00 TRENDS IN COMPUTER GRAPHICS IN SUPPORT OF CAD/CAM

J. Staudhammer and J.Y. Shi, University of Florida, U.S.A.

14.00–14.30 HIERARCHIAL SYSTEMS FOR INTERACTIVE RASTER GRAPHICS M. Berger and S. Chen, University of Colorado, U.S.A.

14.30–15.00 TEXTURE SYNTHESIS LANGUAGE FOR COMPUTER-GENERATED IMAGES

A. Kaufman and S. Azaria, Ben-Gurion University of the Negev, Israel

15.00-15.30 Coffee break

SOFTWARE

HALL B

Chairpersons:

S. Graham, University of California - Berkeley, U.S.A.

A. Reiter, Reiter Software Systems Ltd., Israel

13.30-14.00 MACHINE DESCRIPTION FOR COMPILER CODE GENERATION. EXPERIENCE SINCE JCIT-3 S. Graham and R.R. Henry, University of California, Berkeley, U.S.A.

14.00-14.30 PROGRAM DEVELOPMENT BY USING A SOURCE LINKER

M. Ancona, L. DeFloriani, G. Dodero and P. Thea, Consiglio Nationale delle Ricerche, Italy

14.30–15.00 ANALYSIS AND TESTING BASED ON SEQUENCING SPECIFICATIONS R.N. Taylor, University of California, U.S.A.

15.00-15.30 Coffee break

	NATURAL LAN	NGUAGE INTERFACES AND KNOWLEDGE	HALL C
	Chairpersons:	A.K. Joshi, University of Pennsylvania, U.S.A. Y. Choeka, Bar Ilan University, Israel	
13.30–14.00		EXPERTISE VIA PROBLEM REPRESENTATION gers University, U.S.A.	
14.00–14.30		ORKBENCH FOR INDEXING DOCUMENTS CGIll University, Canada	
14.30–15.00		UAGE PROCESSING WITH COMSKEE It, Universitaet des Saarlandes, Fed. Rep. Germany	
15.00–15.30	Coffee break		
	HARDWARE -	SOFTWARE INTERACTIONS	HALL A
	Chairpersons:	A. Peled, International Business Machines Corporation J. Katzenelson, Technion – Israel Institute of Technol	
15.30–16.00		E-SOFTWARE LONG RANGE TECHNOLOGY OUTLOOK ational Business Machines Corporation, U.S.A.	
16.00–16.30		ACHINE: A COMPUTER FOR SOFTWARE ENGINEERING G. Berkley, Queens College of CUNY, U.S.A.	
16.30–17.00		TION SYSTEM FOR PARALLEL ARCHITECTURES elaer Polytechnic Institute, U.S.A.	
17.00–17.15	Break		

17.00-17.15 Break

HALL B SOFTWARE S. Graham, University of California - Berkeley, U.S.A. Chairpersons: A. Reiter, Reiter Software Systems Ltd., Israel PROGRAM EVOLUTION, THE PROGRAMMING PROCESS, PROGRAMMING SUPPORT 15.30-16.00 M. Lehman, Imperial College, UK 16.00-16.30 INTERACTIVE DEVELOPMENT OF SOFTWARE SPECIFICATIONS J.L. Darlington, GMD Fed. Rep. Germany COMPUTER ASSISTED REQUIREMENTS SPECIFICATION SYSTEM (CARS) 16.30-17.00 S.G. Tolchin, E.S. Bergan, M.A. Espenshade, R.S. Grossman, S.A. Kahn, M.J. Schneider and R.F. Wachter, Johns Hopkins University, U.S.A. 17.00-17.15 Break HALL C EXPERT SYSTEMS Chairpersons: E. Feigenbaum, Stanford University, U.S.A. Y. Makowsky, Technion - Israel Institute of Technology, Israel 15.30-16.00 KNOWLEDGE SYSTEMS E. Feigenbaum, Stanford University, U.S.A. AN EXPERT SYSTEM FOR LIVER FUNCTION TESTS 16.00-16.30 E. Chang, K. Gamble and M. McNeely, University of Victoria, Canada 16.30-17.00 KNOWLEDGE-BASED PROJECT MANAGEMENT AND COMMUNICATION SUPPORT IN A SYSTEM **DEVELOPMENT ENVIRONMENT**

B.I. Kedzierski, Kestrel Institute, U.S.A.

HARDWARE - SOFTWARE INTERACTIONS

HALL A

Chairpersons:

A. Peled, International Business Machines Corporation, U.S.A.

J. Katzenelson, Technion - Israel Institute of Technology, Israel

17.15–17.45 ON SOFTWARE PROTECTION

A. Herzberg, Technion - Israel Institute of Technology, Israel, and G. Karmi, Tel-Dan

Co. Ltd., Israel

17.45–18.15 ON TWO ONE-STEP ALGORITHMS FOR THE RESTORATION OF BAND-LIMITED SIGNALS WITH

LIMITED SPATIAL INFORMATION

N.N. Abdelmalek, National Research Council of Canada, Canada

COMPUTERS IN EDUCATION

HALL B

Chairpersons:

S. Charp, Consultant - Education and Training, U.S.A.

L. Osin, Centre for Educational Technology, Israel

17.15–17.45 ROBOTS USING TECHNOLOGY TO TEACH NEW TECHNOLOGY

K. Cohen and C. Meyer, Continuous Learning Corporation, U.S.A.

17.45–18.15 WORD PROCESSING AS AN EDUCATIONAL TOOL

S. Wolfson, Wayne State University, U.S.A.

EXPERT SYSTEMS

HALL C

Chairpersons:

E. Feigenbaum, Stanford University, U.S.A

Y. Makovsky, Technion - Israel Institute of Technology, Israel

17.15-17.45 GENERALIZING EXPERT SYSTEMS - A PROBLEM- DRIVEN APPROACH

M. Ben-Bassat, Tel Aviv University, Israel, and University of California, U.S.A.

17.45–18.15 AN EXPERT SYSTEM FOR THE MANIPULATION OF PROGRAMS

J-M. Fouet, University of Paris, France

	ROBOTICS		HALL A
	Chairpersons:	R. Nagel, Lehigh University, U.S.A. G. Halevi, Israel Military Industries, Israel	
09.00-09.30		e OF THE ART REVIEW n University, U.S.A.	
09.30-10.00		NERATION OF GRIPPING POSITIONS ersity of Michigan, U.S.A.	
10.00-10.30		PLICATIONS OF SOLID MODELLING Rensselaer Polytechnic Institute, U.S.A.	
10.30-11.00	Coffee break		
	DATABASES		HALL B
	DATABASES Chairpersons:	E.J. Neuhold, Hewlett-Packard, U.S.A. M. Hanani, Ben-Gurion University of the Ne	
09.00-09.30	Chairpersons:		
09.00-09.30 09.30-10.00	Chairpersons: DATABASES - TH E.J. Neuhold and THE POWER STRU	M. Hanani, Ben-Gurion University of the Neg	
	Chairpersons: DATABASES – TH E.J. Neuhold and THE POWER STRU	M. Hanani, Ben-Gurion University of the New ENEXT TEN YEARS IN N. Derrett, Hewlett-Packard, U.S.A. UCTURE OF DATABASE SYSTEMS Lockman, Rutgers University, U.S.A. IE DESIGN OF MULTI-DATABASE MANAGEMENT	gev, Israel

RELIABLE SYSTEMS

HALL C

Chairpersons:

J-C. Laprie, LAAS, France

D. Dolev, The Hebrew University of Jerusalem, Israel

09.00-09.30 RELIABILITY ISSUES IN DISTRIBUTED SYSTEMS

B. Randell, University of Newcastle-upon-Tyne, U.K.

09.30-10.00 A RIGOROUS APPROACH TO FAULT TOLERANT PROGRAM DESIGN

F. Cristian, International Business Machines Corporation, U.S.A.

10.00–10.30 TOWARDS A TAXONOMY OF DEPENDABLE COMPUTING

J-C. Laprie, LAAS, France

10.30-11.00 Coffee break

COMPUTER COMMUNICATIONS NETWORKS

HALLA

Chairpersons:

Y. Yemini, Columbia University, U.S.A.

R. Atar, Israel Discount Bank Ltd., Israel.

11.00-11.30 RESEARCH DIRECTIONS IN DISTRIBUTED COMPUTING AND COMMUNICATIONS

Y. Yemini, Columbia University, U.S.A.

11.30-12.00 A DISTRIBUTED ALGORITHM FOR CONSTRUCTING A MINIMUM-WEIGHT SPANNING TREE IN A

FULLY CONNECTED BROADCAST NETWORK

Y. Gold and S. Moran, University of Connecticut, U.S.A., and Technion - Israel Institute of Technology, Israel

COMMUNICATION INTERFACE DESIGN CONSIDERATIONS FOR HIGH AVAILABILITY 12.00-12.30

DISTRIBUTED SYSTEMS

I. Chlamtac and O. Ganz, Technion - Israel Institute of Technology, Israel

12.30-14.00 Lunch break

	DATABASES HALL B
	Chairpersons: E.J. Neuhold, Hewlett-Packard, U.S.A. M. Hanani, Ben-Gurion University of the Negev, Israel
11.00–11.30	IMPACT OF DATABASE STRUCTURES AND DATABASE STORAGE DEVICES FOR RETRIEVAL RESPONSE TIMES T. Watanabe, Kyoto University, Japan
11.30–12.00	SSDB - AN ARCHITECTURE FOR STATISTICAL DATABASES G. Ozsoyoglu and Z.M. Ozsoyoglu, Case Western Reserve University, U.S.A.
12.00–12.30	APPLYING GRAPH BASED LOCKING PROTOCOLS TO RELATIONAL DATABASE SYSTEMS K. Gargeya and A. Silberschatz , University of Texas, U.S.A.
12.30–14.00	Lunch break
	RELIABLE SYSTEMS HALL C
	Chairpersons: J-C. Laprie, LAAS, France D. Dolev, The Hebrew University of Jerusalem, Israel
11.00–11.30	FAULT TOLERANT ADA ARCHITECTURE R. Schwartz, SRI International, U.S.A
11.30–12.00	PREDICTIVE QUALITY OF SOFTWARE RELIABILITY MODELS B. Littlewood, City University London, U.K.
12.00-12.30	SURVNET, A PROTOTYPE FAULT TOLERANT COMPUTER LOCAL AREA NETWORK J.L. Katz, E.C. Grund, R.P. Cope and A. Glick, The MITRE Corporation, U.S.A.
12.30–14.00	Lunch break

Thursday, 2	24 May, 1984	
	COMPUTER COMMUNICATIONS NETWORKS	HALL A
	Chairpersons: Y. Yemini, Columbia University, U.S.A. R. Atar, Israel Discount Bank Ltd., Israel	
14.00–14.30	AN EXTENDED METHOD FOR PROTOCOL VALIDATION G. Messina, Universita di Catania, Italy	2 2 1
14.30–15.00	CSMA WITH COLLISION DETECTION FOR RADIO CHANNELS R. Rom, Technion – Israel Institute of Technology, Israel	
15.00–15.30	APPROXIMATE PERFORMANCE MODEL FOR ASYNCHRONOUS CIRCUIT SWITCHE NETWORKS L. Ciminiera and A. Serra, Politecnico di Torino, Italy	D DELTA
15.30–16.00	Coffee break	
	DATABASES	HALL B
	Chairpersons: E.J. Neuhold, Hewlett-Packard, U.S.A. M. Hanani, Ben-Gurion University of the Negev, Israel	
14.00–14.30	AUTOMATIC LOGICAL DATABASE DESIGN IN A CODASYL ENVIRONMENT A. Dileva and P. Giolito, University of Torino, Italy	
14.30–15.00	TOWARDS A FLEXIBLE USER INTERFACE TO RELATIONAL DATABASE SYSTEMS T. Imielinski and D. Rozenschtein , Rutgers University, U.S.A.	
15.00–15.30	AN APPROACH TO CONCEPTUAL SCHEMA SUPPORT IN A RELATIONAL DBMS EN $\mathbf{H.\ Kilov},\ U.S.S.R.$	VIRONMENT
15.30–16.00	Coffee break	

P. Ein-Dor, Tel Aviv University, Israel 14.30-15.00 THE INFORMATION RESOURCE CENTER

Chairpersons:

15.00-15.30 THE NEW FACE OF VIDEOTEX

15.30-16.00 Coffee break

S. Winkler, National Bureau of Standards, U.S.A.

J. Gescei, University of Montreal, Canada

S. Winkler, National Bureau of Standards, U.S.A.

COMPUTER COMMUNICATIONS NETWORKS

HALL A

Chairpersons:

Y. Yemini, Columbia University, U.S.A.

R. Atar, Israel Discount Bank Ltd., Israel

16.00–16.30 PETRINET ORIENTED TOOLS FOR A PROTOCOL DESIGN METHODOLOGY

J.M. Ayache and J.P. Courtiat, Centre National de la Recherche Scientifique, France

16.30-17.00 ETHERNET MODELS WITH DIFFERENT SYSTEM CRITERIA

M. Melman. Weizmann Institute of Science, Israel

OFFICE AUTOMATION

HALL B

Chairpersons:

M. Zloof, International Business Machines Corporation, U.S.A.

J. Finkel, Weizmann Institute of Science, Israel

16.00–16.30 FUTURE OFFICE SYSTEMS: CONCEPTS AND FACILITIES

M. Zloof, International Business Machines Corporation, U.S.A.

16.30-17.00 DITROFF/FFORTID: AN ADAPTATION OF UNIX'S DITROFF FOR FORMATTING BI-DIRECTIONAL

TEXT

C. Buchman and D.M. Berry, University of California - L.A., U.S.A.

17.00–17.30 A UNIVERSAL OFFICE AUTOMATION SCHEME

R. Krishnamurthy and G. Hochgesang, International Business Machines Corporation,

U.S.A.

INFORMATION SYSTEMS

HALL C

Chairpersons:

S. Winkler, National Bureau of Standards, U.S.A

P. Ein-Dor, Tel Aviv University, Israel

16.00-16.30 VALUE AND EFFECTIVENESS OF INFORMATION IN DECISION-MAKING

M.C. Yovits, Purdue University, U.S.A.

16.30-17.00 ACTIVE INFORMATION SYSTEM

C. Rolland, O. Foucaut and O. Thiery, University of Paris, France

Friday, 25 May, 1984

CHALLENGE OF THE FIFTH GENERATION

	(Plenary Session)	LL
	Chairperson: D. Brandin, SRI International, U.S.A.	
08.30-09.15	CHALLENGE OF THE JAPANESE FIFTH GENERATION D. Brandin, SRI International, U.S.A.	
09.15–10.00	KNOWLEDGE PROCESSING - THE IMPORTANT COMPUTER REVOLUTION E. Feigenbaum , Stanford University, U.S.A.	
10.00-10.30	Coffee break	
10.30–11.15	TECHNOLOGY AND FIFTH GENERATION COMPUTING - WHO IS TRANSFERRING WHAT WHOM? M. Harrison, University of California - Berkeley, U.S.A.	го
11.15–12.00	ESPRIT: A EUROPEAN APPROACH TO THE CHALLENGE OF INFORMATION TECHNOLOG J.M. Cadiou, Commission of European Communities, France	Y
12.00-13.00	PENAL DISCUSSION: CHALLENGE OF FIFTH GENERATION AND IMPLICATIONS D. Brandin, E. Feigenbaum, M. Harrison, J.M. Cadiou and E. Shapira, (Weizmann Institute of Science, Israel)	L
13.00-13.15	Closing Remarks	

SOCIAL EVENTS

The Organizing Committee invites all registered participants and registered accompanying persons to the following events:

RECEPTION
Monday, May 21, 18:30

A welcoming reception will be held at the Binyanei Ha'ooma Convention Center.

ISRAELI FOLKLORE PERFORMANCE Monday, May 21, 21:00

Song and dance show presents Israeli folklore in traditional, ethnic costumes, at the Jerusalem Theatre.

RECEPTION AT THE ISRAEL MUSEUM
Tuesday, May 22, 20:30 (departure 20:00)*

By kind invitation of the Municipality of Jerusalem, a reception will be held at the Israel Museum. Light drinks and refreshments will be served, and participants will be free to view at their leisure the archeological treasures in the Museum and the Dead Sea Scrolls in the adjacent Shrine of the Book.

* Buses will depart from the Jerusalem Hilton and Sonesta Hotels at 20:00 and return from the parking lot at the entrance to the Museum at 22:15.

FAREWELL BANQUET (Optional)
Thursday, May 24, 20:30

Festive dinner and entertainment featuring Israeli Folklore will be held at the Jerusalem Hilton Hotel.

PROGRAM FOR REGISTERED ACCOMPANYING PERSONS

OLD CITY TOUR Tuesday, May 22, 13:00-17:00

Assemble for departure at the Jerusalem Hilton Hotel upper lobby. Buses will proceed directly to the Old City of Jerusalem for a guided tour of the religious and historic sites of the city, which is sacred to three of the world's great religions. Among the sites to be visited are the Jaffa Gate, David's Tower, the Christian Quarter, including the Via Dolorosa and the Church of the Holy Sepulchre, the Armenian Quarter, the Jewish Quarter, the Moslem Quarter, the Western (Wailing) Wall, and the Temple Mount with the Mosque of Omar and El Aksa Mosque. Ample time will be provided for browsing and shopping in the myriad booths and shops which are typical of the Middle Eastern casbah.

NEW CITY TOUR Thursday, May 24, 09:00-13:00

Assemble for departure at the Jerusalem Hilton Hotel upper lobby. Buses will proceed to the New City of Jerusalem for a guided tour of the Hadassah Hospital, whose synagogue contains stained-glass windows by Marc Chagall; the Kennedy Memorial; the Yad Vashem memorial to victims of the Holocaust; the Knesset (Parliament) building, and the model of ancient Jerusalem.

Additional tours may be purchased at the Conference Travel Desk.

GENERAL INFORMATION

Location

Binyanei Ha'ooma Convention Center, Jerusalem, tel: (02) 221174.

Badges

The personal envelope which you received upon registration contains, among other items, your name badge. Please wear the badge, which serves as your admission ticket to the scientific sessions and the scheduled social functions.

Office and Desks

Registration
Information
Secretariat/Organizing Committee
Travel - International Ltd.

Telephones

Public telephones are situated in the Binyanei Ha'ooma Convention Center. These telephones are operated only by tokens, which may be purchased at the Information Desk.

Projection

Speakers are kindly requested to hand their slides to the projectionist prior to the relevant session. Slides must be marked with the speaker's name as well as date, hour and title of session. Slides must be collected from the projectionist immediately after presentation. Special requirements must be notified a day prior to presentation.

Postal Services

A special postal service will be available at Binyanei Ha'ooma from 11:00 hours to 17:00 hours on Tuesday, May 22, and outgoing mail will be stamped with a special cancellation commemorating the 4th Jerusalem Conference on Information Technology. For postal services during the rest of the Conference week, please apply to the Information Desk.

Photographer

Photographs of special events will be on display within 24 hours of the event.

Instructions to Speakers and Chairpersons

Chairpersons and speakers are requested to meet with each other 30 minutes prior to the commencement of their respective session, in the session hall. In order to make it possible for participants to plan attendance at different parallel sessions, it is essential that the time table be strictly adhered to.

Meals and Refreshments

At the Binyanei Ha'ooma Convention Center:

Cafeteria serving sandwiches and hot and cold drinks.

Lunches are available at a self-service restaurant, and also at a table-service restaurant.

At the Jerusalem Hilton Hotel:

The Judean Lounge (dairy meals)

The Hamsah Restaurant.

Farewell Banquet

A Farewell Banquet will be held on Thursday, May 24, at 20:30 hours, at the Jerusalem Hilton Hotel. The Banquet includes dinner and entertainment featuring Israeli Folklore.

Price: \$20 per person.

Tickets may be purchased at the Information Desk until Wednesday, at 11:00 hours.

Tourist Information

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International Ltd. is the Official Travel Agent for the Conference and will provide participants with all necessary tourist services.

INTERNATIONAL LTD. will operate a Travel Desk at the Conference Headquarters, which will be open daily for the duration of the Conference and will arrange for participants tours and excursions by coach, air, private car with guide, rent-a-car, additional hotel accommodation required for the period following the Conference, and reconfirmation of return flights.

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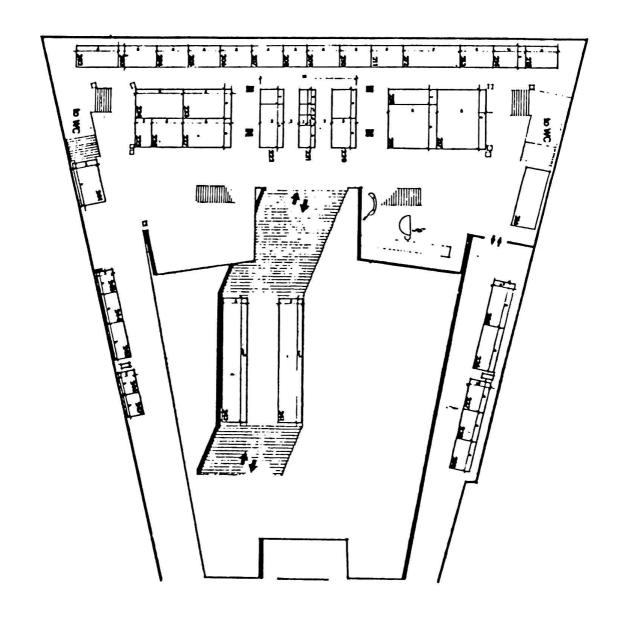
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